The Universities and Environmental Quality, Commitment to Problem Focused Education. A Report to the President's Environmental Quality Council, September 1969. Available from Supt. of Documents, U.S. Govt. Printing Office, Washington, D.C. 20402; 70¢.

A Progress Report: Individually Prescribed Instruction. Research for Better Schools, Inc., 1700 Market St., Philadelphia, Pa. 19103; 1969, 56 pp.

Picture Processing by Computer. By Azriel Rosenfeld. Academic Press, 111 Fifth Ave., New York, N.Y. 10003; 1969, 196 pp., $11.50.

"Science Education for Underprivileged Youth." The November 1969 issue of *Science Education News*, published quarterly by the American Association for the Advancement of Science, 1515 Massachusetts Ave., N.W., Washington, D.C. 20005. AAAS Misc. Pub. No. 69-14. 8 pp.

Social Aspects of Housing and Urban Development: A Bibliography. National Swedish Institute for Building Research for the United Nations Centre for Housing, Building and Planning. Clearinghouse, U.S. Dept. of Commerce, Springfield, Va. 22151; 1969, 166 pp., $3, microfiche 65¢.

Translation Talk. A new publication relating to language translations needed in commerce and industry. Subscriptions may be obtained free by writing to Translation Company of America, 500 Fifth Ave., New York, N.Y. 10036.

Space Resources for Teachers: Space Science. National Aeronautics and Space Administration. Available from U.S. Supt. of Documents, U.S. Govt. Printing Office, Washington, D.C. 20402; 1969, EP-64, $2.00.

ECS, Politics and Higher Education Coordination. By D. Robert Graham, Florida State Representative. Occasional Paper No. 2, 1969. Available free from the Education Commission of the States, 822 Lincoln Tower, 1860 Lincoln St., Denver, Colo. 80203.

Systems Education Patterns on the Drawing Boards for the Future. Highlights of the Second Annual National Conference on General Systems Education. Edited by Jere W. Clark. Available free from Center for Interdisciplinary Creativity, Southern Connecticut State College, 501 Crescent St., New Haven, Conn. 06515; 1968, 42 pp.

Constructive Changes To Ease Campus Tensions. National Association of State Universities and Land-Grant Colleges. Available from National Association of State Universities and Land-Grant Colleges, Office of Institutional Research, Suite 710, One Dupont Circle, Washington, D.C. 20036; 1970, 54 pp., $2. △

Annual Index

Engineering Education Volume 60, 1969-70

The page numbers in this index refer to the regular issues of *Engineering Education* for 1969-70:

1- 72	September	431-494	February part 1
73-148	October part 1	495-694	February part 2
149-204	October part 2	695-790	March
205-270	November	791-862	April
271-346	December	863-934	May
347-430	January	935-998	June

NOTE: October part 2 is the ASEE *Databook*, containing the Society Yearbook and Membership Directory. February part 2 is the *Annual Directory of Engineering College Research and Graduate Study*, which contains its own detailed index (see pp. 680-694).

In this index, **boldface** type indicates subject headings; *italics* indicate authors; and the titles of articles and departments appear in regular type. Page numbers are explained above.

A

About Nominations for ASEE Officers, 26
accreditation: of curricula, 305, 318, 967; of engineers, 286
Accreditation and Certification in Engineering Technology, 305
Action Plan for the Establishment of a United Engineering Information Service, 371
Adams, James L., 104
Administrative Planning Factors in Engineering Education, 459
admissions policies, 101
Advertisers in This Issue, 72, 148, 270, 346, 430, 494, 790, 862, 934, 998
Africa, 146
Agency for Certification in Environmental Engineering, The, 234
Aids for Educators, 16, 85, 218, 354, 486, 706, 852, 915
Alden, John D., 331, 399, 410
Annual Directory of Engineering College Research and Graduate Study, 497
Apparatus for Determining Energy Gap of Semiconductor Material, 926
Applying Systems Theory in the Social Sciences, 829
ASEE activities: About the Society, 153; activity coordinators, 196; annual conference (1971), 950; annual meeting (1969), 36, 38; annual meeting (1970), 442, 704, 800, 871; annual meeting abstracts (1969), 55; Atomic Energy Commission, 467; audit report 1968-69, 191; Board of Directors, 154; branches, 198; Constitution and Bylaws, 155; Continuing Engineering Studies Division call for papers, 761; Cooperative Education Division conference, 300; Councils—Engineering College Administrative Council 185, Engineering College Research Council 187, Technical Institute Administrative Council 189, Sections East and West 192, General Divisions and Committees 199, Technical Divisions and Committees 201; Databook, 149; design projects digest, 907; distinguished lecture (1969), 101; effective teaching institutes, 52; ECRC conferences on industry-engineering college relationships, 458; ECRC Research Administration Workshops, 456; *Engineering Education* editorial schedule 1970-71, 818; engineering technology education study, 65; Environmental Engineering Intersociety Board, 234; faculty development survey, 846; Graphics Division, 40; guide for authors, 184, 933; headquarters staff, 162; "Humanizing Education through Technology" conference, 365; incoming president's address, 33; membership information, 168; membership list—see October part 2, p. 205; NASA Summer Faculty Fellowship Programs, 221, 815, 819; national awards 1969, 43; OCD programs, 53; officer nominations 1970-71, 26; organization chart, 159; outgoing president's address, 38; 1970 Engineering College Research and Graduate Study Directory, 497; periodicals, 168; projects, 179; publications, 169, 420, 854; Relations with Industry Division conference, 334; reorganization, 947; representatives to other organizations, 162; Society records, 170; Western Electric Fund awards, 50; Your Society's Business, 41, 870
ASEE-AEC Interaction, 467
ASEE in Review, 38
Atlas, Amy L., 393
Atomic Energy Commission, 467
audio aids, 920
audio-tutorial instruction, 737, 759, 896
Audio-Tutorial Instruction — What, Why, and How, 759
Audio-Tutorial Techniques for Laboratory Instruction, 896
audio-visual aids, 741, 748, 762

The Universities and Environmental Quality, Commitment to Problem Focused Education. A Report to the President's Environmental Quality Council, September 1969. Available from Supt. of Documents, U.S. Govt. Printing Office, Washington, D.C. 20402; 70¢.

A Progress Report: Individually Prescribed Instruction. Research for Better Schools, Inc., 1700 Market St., Philadelphia, Pa. 19103; 1969, 56 pp.

Picture Processing by Computer. By Azriel Rosenfeld. Academic Press, 111 Fifth Ave., New York, N.Y. 10003; 1969, 196 pp., $11.50.

"Science Education for Underprivileged Youth." The November 1969 issue of *Science Education News*, published quarterly by the American Association for the Advancement of Science, 1515 Massachusetts Ave., N.W., Washington, D.C. 20005. AAAS Misc. Pub. No. 69-14. 8 pp.

Social Aspects of Housing and Urban Development: A Bibliography. National Swedish Institute for Building Research for the United Nations Centre for Housing, Building and Planning. Clearinghouse, U.S. Dept. of Commerce, Springfield, Va. 22151; 1969, 166 pp., $3, microfiche 65¢.

Translation Talk. A new publication relating to language translations needed in commerce and industry. Subscriptions may be obtained free by writing to Translation Company of America, 500 Fifth Ave., New York, N.Y. 10036.

Space Resources for Teachers: Space Science. National Aeronautics and Space Administration. Available from U.S. Supt. of Documents, U.S. Govt. Printing Office, Washington, D.C. 20402; 1969, EP-64, $2.00.

ECS, Politics and Higher Education Coordination. By D. Robert Graham, Florida State Representative. Occasional Paper No. 2, 1969. Available free from the Education Commission of the States, 822 Lincoln Tower, 1860 Lincoln St., Denver, Colo. 80203.

Systems Education Patterns on the Drawing Boards for the Future. Highlights of the Second Annual National Conference on General Systems Education. Edited by Jere W. Clark. Available free from Center for Interdisciplinary Creativity, Southern Connecticut State College, 501 Crescent St., New Haven, Conn. 06515; 1968, 42 pp.

Constructive Changes To Ease Campus Tensions. National Association of State Universities and Land-Grant Colleges. Available from National Association of State Universities and Land-Grant Colleges, Office of Institutional Research, Suite 710, One Dupont Circle, Washington, D.C. 20036; 1970, 54 pp., $2. △

Annual Index

Engineering Education Volume 60, 1969-70

The page numbers in this index refer to the regular issues of *Engineering Education* for 1969-70:

1- 72	September	431-494	February part 1
73-148	October part 1	495-694	February part 2
149-204	October part 2	695-790	March
205-270	November	791-862	April
271-346	December	863-934	May
347-430	January	935-998	June

NOTE: October part 2 is the ASEE *Databook*, containing the Society Yearbook and Membership Directory. February part 2 is the *Annual Directory of Engineering College Research and Graduate Study*, which contains its own detailed index (see pp. 680-694).

In this index, **boldface** type indicates subject headings; *italics* indicate authors; and the titles of articles and departments appear in regular type. Page numbers are explained above.

A

About Nominations for ASEE Officers, 26
accreditation: of curricula, 305, 318, 967; of engineers, 286
Accreditation and Certification in Engineering Technology, 305
Action Plan for the Establishment of a United Engineering Information Service, 371
Adams, James L., 104
Administrative Planning Factors in Engineering Education, 459
admissions policies, 101
Advertisers in This Issue, 72, 148, 270, 346, 430, 494, 790, 862, 934, 998
Africa, 146
Agency for Certification in Environmental Engineering, The, 234
Aids for Educators, 16, 85, 218, 354, 486, 706, 852, 915
Alden, John D., 331, 399, 410
Annual Directory of Engineering College Research and Graduate Study, 497
Apparatus for Determining Energy Gap of Semiconductor Material, 926
Applying Systems Theory in the Social Sciences, 829
ASEE activities: About the Society, 153; activity coordinators, 196; annual conference (1971), 950; annual meeting (1969), 36, 38; annual meeting (1970), 442, 704, 800, 871; annual meeting abstracts (1969), 55; Atomic Energy Commission, 467; audit report 1968-69, 191; Board of Directors, 154; branches, 198; Constitution and Bylaws, 155; Continuing Engineering Studies Division call for papers, 761; Cooperative Education Division conference, 300; Councils—Engineering College Administrative Council 185, Engineering College Research Council 187, Technical Institute Administrative Council 189, Sections East and West 192, General Divisions and Committees 199, Technical Divisions and Committees 201; Databook, 149; design projects digest, 907; distinguished lecture (1969), 101; effective teaching institutes, 52; ECRC conferences on industry-engineering college relationships, 458; ECRC Research Administration Workshops, 456; *Engineering Education* editorial schedule 1970-71, 818; engineering technology education study, 65; Environmental Engineering Intersociety Board, 234; faculty development survey, 846; Graphics Division, 40; guide for authors, 184, 933; headquarters staff, 162; "Humanizing Education through Technology" conference, 365; incoming president's address, 33; membership information, 168; membership list—see October part 2, p. 205; NASA Summer Faculty Fellowship Programs, 221, 815, 819; national awards 1969, 43; OCD programs, 53; officer nominations 1970-71, 26; organization chart, 159; outgoing president's address, 38; 1970 Engineering College Research and Graduate Study Directory, 497; periodicals, 168; projects, 179; publications, 169, 420, 854; Relations with Industry Division conference, 334; reorganization, 947; representatives to other organizations, 162; Society records, 170; Western Electric Fund awards, 50; Your Society's Business, 41, 870
ASEE-AEC Interaction, 467
ASEE in Review, 38
Atlas, Amy L., 393
Atomic Energy Commission, 467
audio aids, 920
audio-tutorial instruction, 737, 759, 896
Audio-Tutorial Instruction — What, Why, and How, 759
Audio-Tutorial Techniques for Laboratory Instruction, 896
audio-visual aids, 741, 748, 762

Audio-Visual Approach to Self-Instruction, An, 748
audio-visual methods, references on, 764
Automobile as Laboratory Equipment, The, 924
automotive technology, 806
Avner, Sidney H., 748
Avtgis, Alexander W., 881

B

bachelor of technology program, 298, 301
Bartkus, E. P., 377
Barylski, John, 40
Beatty, H. Russell, 295
Ben-Arroyo, A., 923
Bennigson, Lawrence A., 22
Bergantz, Joseph A., 846
bioengineering, 239, 245, 252
biology, alliance for engineering in medicine and, 239
biology, teaching of, 737
Bi-University Institutional Liaison for Development, 840
Bollay, William, 803
Bordogna, Joseph, 393
Brickner, Edwin L. II, 926
Britton, Charles C., 931
Brock, R. R., 889
Brown, Ralph A., 313
Bryant, E. Denton, Jr., 327
BUILD Spells Excellence, 840
Bundy, E. Wayne, 125, 762
bureaucracy, 974
Burr, Arthur A., 289

C

Cairns, R. W., 375
Californium-252, A New Neutron Source for Laboratories, 922
Call for Papers on Continuing Engineering Studies, A, 761
Canter, L. W., 250
Cardenas, Rafael S., 921
career choices, 293
Carlson, A. Bruce, 240
Carson, R. G., Jr., 316
Case for Professional Registration, A, 329
Case Histories for Teaching Environmental Concern, 269
case method, 104, 269, 745, 931. *See also* "Case Study Reviews."
Case Studies for Freshman Engineering, 931
Case Study Reviews, 66, 258, 398, 774, 909, 942
Center for Laboratory-Oriented Studies and Experimentation, 876
ceramic engineering, 8
certification: in engineering technology, 305; in environmental engineering, 234
Chambers, Carl C., 38
Changing Society and the Responsibility of Engineers, 235
Characteristics of Engineering Students, 980
civil engineering, 711, 923
CLOSE — Center for Laboratory-Oriented Studies and Experimentation, 876
Cohen, David M., 366
College-Industry Conference To View Current Campus Scene, 334
colleges, tradition-bound, 89
Collins, W. Leighton, 4, 41, 76, 124, 208, 276, 350, 434, 698, 794, 866, 938
Coming: A Design Projects Digest, 907
Committee Proposes Sweeping Changes in Engineering Identity and Registration, 286
communication, student-faculty, 19, 25, 31, 33, 109, 722
Compton, Bertita E., 375
Computer Plotting of Graphs, 470
computer-assisted instruction, 384
computer engineering program, 393, 835
Computer Scoring of Slide Rule Tests, 929
computers, 120, 363, 470, 755, 829, 929
conference, professional, 145
Conference on New Dimensions in Cooperative Education, 300
continuing engineering studies, 123, 910, 911, 974
cooperative education, 326, 327
cooperative education conference, 300
Corcoran, William H., 450
core curriculum, 889
Core Laboratory Course, A, 889
Cox, J. E., 819
Crandell, Howard S., 493
creativity, 139, 923
Creighton, Donald L., 905
Curricula in Transition, 54, 80, 262, 416, 489, 782, 844, 914, 973
curriculum: computer engineering, 393, 835; engineering, 22, 97, 101, 287, 289, 293, 309, 488, 964, 974; environmental engineering, 226, 242, 245, 250; graduate, 318; graphics, 739; honors, 472, 905; international development studies, 247; laboratory, 876, 881, 889; materials, 838; professional, 960; standardization of, 89; systems engineering, 832, 836; technology, 295, 298, 301, 881
Cutchins, M. A., 819, 823

D

Davis, Stanley W., 327
Databook, 149
Defore, Jesse J., 305
degrees: engineering, 318, 368, 399, 856; technology, 410; requirements (1970 Engineering College Research and Graduate Study Directory), 497
design: civil engineering, 493, 711; engineering systems, 827; options, 747; projects digest, 907
Determining Emissivities of Materials in the Student Laboratory, 921
Developing Technical Leaders through Cooperative Education, 327
disorders, campus, 19, 33, 89, 951
Divisions and Sections, 142, 345, 426, 455, 780
DiZio, Steven F., 252
Do You Know? 4, 76, 208, 276, 350, 434, 698, 794, 866, 938
Dorsey, B. R., 226
Downward Trend in Engineering Enrollments, 979
draft, 27, 42
drafting and design, options in, 747
Draper, C. S., 806
Drucker, Eugene E., 924
Dubin, Samuel S., 366
Duffey, Dick, 922

E

Ebel, Robert L., 720
ECRC Research Administration Workshops, 456
ECRC Sponsors Conferences on Industry-Engineering College Relationships in Research and Education, 458
Educational Goals of Teacher and Students, 718
Education in Systems Engineering, 836
Educational Resources Information Center, 380
Educational Technology in Higher Education: The Promises and Limitations of ITV and CAI, 384
EDUCOM: Interuniversity Communication Council, 369
Effective College Teacher, The, 716
effective teaching: audio-tutorial instruction, 737, 759; audio-visual aids, 125, 741, 748, 762, 764; computers, 755; course in engineering teaching, 323; homework, 120; individualized instruction, 735, 739, 749, 905; institutes on, 52; materials, 745, 758; measuring, 325; problem-solving skills, 732; process, 716, 718, 722, 726; references, 755, 758, 764; self-instruction, 748, 879; systems engineering and, 823; using tests, 720
Eldin, H. K., 836
electrical engineering, 97, 393, 472, 886, 894, 926
Electrogasdynamics Experiments for Undergraduates, 883
electronics, 919
Eliassen, Rolf, 237
Ellis, Pierce G., 329
EMC Statement on the Draft of Graduate Students, 42
EMC Survey Finds Engineering Technician Salaries Increased, 959
Emerging Bachelor of Technology Program, The, 298
emissivities of materials, 921
energy conversion experiments, 883
energy gap of semiconductor material, 926
Engineer in the Community Hospital, The, 252
Engineering and Professional Education, 101
Engineering Bachelor of Technology Program, The, 298
Engineering College Research and Graduate Study Directory 1970, 497
Engineering Degrees 1968-69, 399
Engineering Design Committee of ASEE, 907
Engineering Education and Practice in the Year 2000, 974
Engineering Education in a Multicampus University, 309
Engineering Faculty Development—Results of a Survey, 846
Engineering Manpower Commission, 42, 368, 399, 410, 856, 959, 979
Engineering Manpower for Environmental Quality Programs, 233
Engineering in Its Social Context—An Experimental Graduate Course, 240
Engineering Student Image, The, 22
Engineering Students Are Not Apathetic! 19

XUM

engineering teaching, course in, 323
Engineering Technology Specializations, 295
Engineers' Council for Professional Development, 265, 305
Engineers Joint Council, 371
Engineer's Role in the Modern World, The, 226
enrollments: trends, 27, 979; 1970 Engineering College Research and Graduate Study Directory, 497
enterprise engineer, 974
environment, 223, 226, 229, 233, 235, 806, 811
Environment and the Space Program, 223
environmental engineering: courses in, 237, 240, 242, 245, 247, 250, 269; certification in, 234
Environmental Health Engineering Curriculum, The, 250
ERIC—Center for Educational Resources Information, 380
Ernst, Edward W., 879
Estimating Faculty Work Load, 117
ethics, 101, 951, 956, 974
Evaluating Learning from the Case Method, 104
Evaluating Teaching Methods in Continuing Engineering Studies, 123
Evaluation and Selection of Graduate Students, 112
Everitt, William L., 448, 840
Experiment in Teaching via Television, An, 125
Experimental Engineering for Sophomores, 894
experimentation, laboratory, 876, 879, 883, 886, 889, 891, 894, 919, 921, 922, 924, 925

F

faculty: communication with students, 19, 25, 31, 33, 109, 722; development, 846, 967; educational goals of, 718; Engineering College Research and Graduate Study Directory, 497; measuring effectiveness of, 325; salary trends, 331, 776; student rating of, 107, 776; work load, 92, 117, 331
fellowships, 112, 221
Fewer Engineering Graduates Seek Advanced Degrees, 368
Field of Materials in Relation to Engineering, The, 838
financing: of education and research, 89, 452, 459, 497; of student magazines, 31
First Materials Science Course, The, 478
Flournoy, Don M., 109
Focus on the Student Magazine, 31
food problems, 223
Forrester, Jay W., 974
Fostering Development of Negro Engineering Colleges, 967
France, D. M., 883
Frautschi, Barbara, 381
Freshman Curriculum for Informed Career Choices, A, 293
freshmen, 10, 293, 931
Freund, C. J., 951
Fuchs, Henry O., 745
Future of Engineering Education and Industry, The, 970

G

Gallessich, June, 980
Gere, James M., 318
Gleason, Burton J., 31
Glower, D. D., 467
Goals of Engineering Research, 445
Goglia, M. J., 474
government, role of in systems engineering, 815
government support of research, 445
grading, 25, 109, 120, 737, 920, 929
Grading Laboratory Reports on Tape, 920
Graduate Engineering Education Today, 318
Graduate Enrollment and the Draft, 27
graduate programs, 448, 452, 472, 497
graduate students, 27, 42, 53, 112
Graduate Record Exam Advanced Test in Engineering, 474
Granville, Paul T., 313
graphics, 739
Graphics Division Display, 40
Graphics Technology Committee, 747
graphs, 470
Grayson, Lawrence P., 755
Greenfield, Lois B., 123, 764
group dynamics, 819
guidance, 8, 265
Guide for Authors, 184, 933
Guide on Uses of Computers in Engineering Education, 755

H

Hafferty, William M., 811
Hagler, M. O., 899
Hamby, H., 819
Hansing, Frank D., 815
Harris, John S., 491
Harrison, Carter H., 921
Hauck, George F., 117
health, 252
heat transfer, 925
Hetherington, M. T., 737
highway design, 493
Hill, Armin J., 92, 301
Hill, Louis A., Jr., 120
Hill, W. Ryland, 107
Hindhede, Uffe, 927
Holstein, Edwin J., 240
Homework Experiments in a Heat Transfer Course, 925
Homework for Theory and Practice, 120
Honors Program Leading Directly to the Master's Degree, An, 472
honors programs, 472, 905
hospital, 252
How Relevant Is the Incidental? 964
How To Use a Programmed Text, 902
humanities, 101, 240, 394, 964, 974
Humanizing Education through Technology, 365
Hurst, R. N., 737
Husband, D. D., 737

I

Ideas in Practice, 139, 269, 491, 710, 919
Ideobics: A Creative Conditioning Program, 139
Impending Instruction Revolution, The, 749
Improving Instruction through Systems Engineering, 823
Incorporating the Humanities and Social Sciences into the Engineering Curriculum, 394
Indian youth, 266
Individualized Honors-Research Program for Undergraduates, An, 905
individualized instruction, 735, 739, 749, 905
Individualized Instruction in Freshman Graphics, 739
industry, 226, 326, 327, 445, 967, 970, 974; conferences, 300, 334, 458
influence lines, 927
Influence of Graduate Programs on Undergraduate Engineering Education, 448
Information Management in Engineering Education, 385
Information Management in the Engineering Schools, 389
information processes, 359, 361, 363, 366, 369, 371, 375, 377, 381, 385, 389
Information Processing Terms and Their Meanings, 381
Information Retrieval, 70, 142, 264, 340, 426, 490, 780, 856, 924, 988
Instant Membrane Analogy, 492
Institute for the Certification of Engineering Technicians, 305
institutional development, 840, 967
instruction revolution, 749
Integrated Circuit Fabrication Laboratory, An, 886
Interdisciplinary Research Topics in Urban Engineering, 229
International Development Technology Center, An, 247
international education, 226, 247
International Engineering Education Conference in Oslo, 124
interuniversity communication council, 369
Involving Engineering Students in Educational Planning, 25

J

Jeppsen, Ernest C., 301
Johnson, B. Lamar, 715
Jones, Edwin C., Jr., 894

K

Katz, Donald L., 369
Kerr, William, 445
Kessler, Julia B., 964
Kizer, Ken, 19
Kobelin, Joel, 929
Koen, Billy V., 735
Kopplin, J. O., 876
Kraybill, Edward K., 52
Kristiansen, M., 899
Kuhlthau, A. R., 456

L

laboratories (1970 Engineering College Research and Graduate Study Directory), 497
laboratory, for information transfer and storage, 359
Laboratory in a Box for Teaching Electronics, A, 919
laboratory instruction, 875, 876, 879, 881, 883, 886, 889, 891, 894, 896, 899, 919, 920, 921, 922, 924, 925, 926
LaPatra, J. W., 829
Lapp, C. J., 112

Laser Laboratory Projects for Undergraduates, 899
lecture: as teaching method, 89; for information transfer and storage, 359
Leimkuhler, Ferdinand F., 363
library, 359, 363, 366, 375, 377, 381
Library Operations Research—An Engineering Approach to Information Problems, 363
licensing of engineers, 286
Lindenlaub, John C., 759, 896
Linsky, Benjamin, 269
Lohmann, M. R., 954
Lonsdale, Edward M., 718
Lukasiewicz, J., 452
Lusignan, Bruce, 811

M

magazines, student, 31
Major Sources of Information for Engineering Educators, 377
Man and His Environment—An Undergraduate Course, 237
manpower, 27, 42, 233, 331, 368, 399, 410, 856
Manrique, Jose A., 921
Martin, Joseph J., 846
Materials-Mechanics Laboratory Course for Undergraduates, A, 891
materials science, 478, 838
McCrary, S. E., 823
McGraw, James L., 298
McKetta, John J., 325
Measuring Faculty Work Load, 92
Measuring Teaching Effectiveness, 325
mechanical engineering, 924
mechanics-materials laboratory course, 891
medicine, 239, 252
Meriam, J. L., 459
microscopy, electron, 710
microteaching techniques, 741
Minder, Thomas, 359
Minicourses as Audio-Tutorial Units, 737
minority groups, 266
Mitchell, John W., 925
Mitzel, Harold E., 749
Model of What Happens in Teaching and Learning, A, 726
Models as a Teaching Aid, 923
Moffat, Robert J., 920
Moore, Richard A., 293
moral standards, 951
Morgan, Paul E., 967
Morgan, Robert P., 247
Morrow, Charles T., 956
Mortenson, Kenneth E., 289
Motivation To Update from a Systems Approach, 366
multicampus university, 309
Murdock, John W., 323

N

National Academy of Engineering Commission on Education, 835, 840
National Academy of Sciences-National Academy of Engineering, 375
National Aeronautics and Space Administration, 221, 223, 815, 819
National Center for Higher Education Building Directory, 757
National Science Foundation, 65, 100, 268, 336, 469, 963
Negro engineering colleges, 967
Negro youth, 266
Neudeck, G. W., 886
neutron source, 922
Nevins, Ralph G., 245
New Alliance for Engineering in Medicine and Biology, 239
New Approach to Engineering Technology Laboratory Instruction, A, 881
New Books in Brief, 68, 134, 254, 335, 428, 482, 766, 850, 916, 992
New Undergraduate Course in Engineering Teaching, A, 323
Novotny, Donald W., 25
NSF Announces Support for Student-Directed Environmental Research, 963
NSF Establishes Program of Interdisciplinary Research on Societal Problems, 469
NSF Programs for Engineering Teachers, 336
NSF Research Initiation Grants, 100
nuclear engineering research, 445

O

Office of Civil Defense, 53
O'Brien, J. F., 819
O'Bryant, David C., 741
OCD Programs Extended for Faculty and Graduate Student Development, 53
Ocean Engineering at the University of Hawaii, 242
Offner, D. H., 139
operations research, library, 363
Options in Drafting and Design, 747
Organization of ASEE: A Tentative Proposal for Consideration and Comments, 947
Our Tradition-Bound Colleges, 89
Outside Reality inside the Classroom, 745

P

Page, Raymond J., 123
Paige, Arlie E., 846
Palladino, N. J., 309
Panel Review of GRE Advanced Test in Engineering, 474
Pask, Joseph A., 838
Peckham, L. N., 899
People and Places, 12, 128, 214, 344, 395, 484, 768, 843, 918, 984
Perkins, James A., 101
Perlberg, Arye, 741
personalized system of instruction, 735
Peterson, John, 492
Pettit, Joseph M., 318
Pfeiffer, Erich A., 919
photoelastic classroom demonstrations, 710
Pilot Study on Mathematics Requirements, 116
Plants, Helen L., 732
population problems, 223
Positions Open, 63, 132, 260, 340, 422, 487, 784, 858, 912, 991
Positions Wanted, 64, 132, 260, 343, 424, 488, 783, 861, 914, 991
Postlethwait, S. N., 737
Practical Highway Design, 493
pre-engineering program, 316
prestige of engineers, 951
problem-solving skills, 120, 361, 732
professional image, 956
professional registration, 286, 329, 956
professional schools, 101, 954
Professional Schools for Engineers, 954
Professions in Modern Society, 960
programmed experimental teaching exercise, 879
programmed instruction, 758, 902
psychological factors of engineering freshmen, 10
Public Concern about Ethics, 951
Publications in Engineering Education—Spring 1970, 854
Pullias, Earl V., 716
purpose of engineering education, 145

Q

Question of Professional Image, The, 956

R

Reader Comment, 8, 145, 265, 776, 856, 910, 986
References on Effective Teaching and Audio-Visual Methods, 764
References on Programmed Instruction, 758
Regional Institutes Attended by over 500 during 1968-69, 52
registration, professional, 286, 329, 956
remedial course, 109
research, 100, 229, 318, 445, 448, 450, 452, 456, 493, 497, 811, 829, 905
Research and Graduate Activities in Engineering Colleges, 1967-68, 452
research topics in urban engineering, 229
responsibility of engineers in society, 226, 235, 268
Richman, Marc Herbert, 478
Rohles, Frederick H., Jr., 245
Role of the Government in Systems Engineering, 815
Root, A. A., 722, 726
Rosenstein, Allen B., 960
Rowe, D. R., 250
Rutledge, Earl T., 739

S

Sabersky, Rolf H., 287
safety education, 910
salaries, trends in, 331, 776, 959
Sample, Steven B., 472
sanitary engineering, 250
SATCOM Report and the Engineer's Information Problem, The, 375
Schedule and Editorial Highlights, 1970-71 *Engineering Education*, 818
Schinzinger, R. W., 889
Schirra, Walter M., Jr., 223
Schmidt, W., 827
Seider, Warren D., 361
self-instruction, 748, 879
Self-Instruction in the Laboratory, 879
Self-Paced Instruction for Engineering Students, 735
semiconductor material, energy gap of, 926
Senftle, Frank E., 922
Sharpe, William N., Jr., 891
Silva, L. F., 886
Simple Approach to Influence Lines, A, 927
slide rule tests, 929
Slides for Laboratory Instruction, 921
soap film analogy, 492

XUM

social sciences, 101, 240, 394, 829, 964
societal problems, 223, 226, 229, 235, 240, 269, 469
Society Calendar, 10, 167, 264, 294, 370, 490, 765, 857, 893, 955
Society Publications, 169, 420, 854
sophomore laboratory course, 894
space program, 223
Stoughton, Bruce C., 300
structural design, 923
Strum, Robert D., 758
students: communication with faculty, 19, 25, 31, 33, 109, 722; draft and, 27, 42; educational goals of, 718; engineering, 19, 22, 25, 33, 980; evaluating learning from cases, 104; evaluation of teachers, 107, 776; graduate, 27, 42, 53, 112; information processors, 361; involvement in curriculum planning, 25, 97, 109; recruiting for engineering, 8; response to personalized system of instruction, 735; social and psychological factors, 10; sponsor research projects, 450; tutors, 109, 120
Student as an Information Processor, The, 361
Student Awards for Creative Design Display, 40
Student Rating of Teachers, 107
Student-Sponsored Research Projects, 450
summer research projects, 450
System Design of Curriculum, 97
Systems Approach to Information in Engineering Education, A, 359
systems approach to updating, 366
Systems Approach to Urban Engineering, A, 811
systems engineering, 803, 806, 811, 815, 819, 823, 827, 829, 832, 836
Systems Engineering and Modern Technology, 806
Systems Engineering as an Academic Discipline, 832

T

tape, grading laboratory reports on, 920
Taylor, Robert S., 385
Teacher and Students Share Course Decisions, 109
teaching effectiveness, measuring, 325
teaching methods: audio-tutorial, 896; audio-visual, 748, 764; cases, 104, 269, 745; computer, 470; continuing engineering studies, 123; course in engineering teaching, 325; homework, 120, 925; materials-mechanics laboratory, 891; programmed instruction, 902; television, 125, 384, 710, 762; tests, 720; traditional, 89. *See also* "Ideas in Practice" and "effective teaching."
Teaching Problem-Solving Skills—Theory or Practice First? 732
Teaching Techniques for the Teleclass, 762
Teaching the Spectrum of Technology, 301
Teamwork by Engineers and Technicians, 313
teamwork in engineering, 109, 313
technical writing, 470, 491
Technical Writing Practice, 491
technician, engineering, 295, 298, 301, 305, 313
technology: applied to higher education, 369; applied to information services, 363; applied to societal problems, 226, 235, 237, 240, 247, 268, 269, 287; degrees, 1968-69, 410; education, 65, 295, 298, 301, 305; hospitals and, 252; laboratory instruction in, 881; systems engineering and, 806
Technology Degrees, 1968-69, 410
television, teaching via, 125, 384, 710, 762
tests, using, 720, 929
Thompson, H. W., Jr., 472
Thompson, Richard E., 470
Thorn, Dona!d C., 125, 762
Torpey, William G., 233
tradition-bound colleges, 89
Training Exercise in Systems Engineering Design, A, 819
Training in Bioenvironmental Engineering, 245
transfer, 295, 309, 316
Transfer Students in Engineering, 316
Trends in Salaries of Engineering Teachers, 331
Trezek, G. J., 883
Tripartite Committee, 371
Tuma, D. T., 889
Two-Dimensional Plan for Engineering Education, A, 289
Tynes, Rex A., 286

U

Undergraduate Computer Engineering Option for Electrical Engineering, An, 835
Undergraduate Computer Engineering Program, An, 393
undergraduate course in engineering teaching, 323
united engineering information service, 371
university interaction, 840
University Projects in Systems Engineering, 803
urban engineering, 229, 811
Urban Engineering Study Committee, 229
Using the Computer in Systems Engineering Design, 827
Using Tests To Improve Instruction, 720

V

Vachon, R. I., 819
Values of Cooperative Education, 326
Venable, Wallace S., 732
Venezian, Giulio, 242
Vesper, Karl H., 104
Vetter, Betty M., 27
Vidale, Richard F., 832
videotape, 125, 741
Videotaping and Microteaching Techniques To Improve Engineering Instruction, 741
visual aids, 470, 710, 921
Vitale, J. A., 815

W

Waina, Richard B., 97
Wales, Charles E., 902
Walker, Eric A., 89
Wandmacher, Cornelius, 326
Ward, John R., 758
Warner, Sir Frederick, 235
Weidhaas, E. R., 309
Weltman, Gershon, 964
Wendt, Kurt F., 25
Western Electric Fund Awards 1969, 50
What Instructors Say to Students Makes a Difference! 722
Who Will Lead the Way in Engineering Education? 287
Wiggins, Peter F., 922
Williams, John A., 242
Williams, Leslie B., 870
Williamson, Merritt A., 33, 947
Witzig, W. F., 467
work load, faculty, 92, 117, 331
writing, technical, 470, 491

Y

Year of the Student, The, 33
Yerazunis, Stephen, 289
Your Society's Business, 41, 870

Advertisers in This Issue

Allyn and Bacon, Inc. 943

Barnes & Noble, Inc. 936

Comdyna, Inc. 985

Compressed Air & Gas Institute 985

Digital Equipment Corp. 935

The Dow Chemical Company .....Cover 3

Holt, Rinehart and Winston, Inc. .....Cover 2

Instron Corporation 989

Charles E. Merrill Publishing Company 946

Prentice-Hall, Inc. 940-941

Scott-Engineering Sciences 944-945

Tecquipment, Inc. 987

John Wiley & Sons, Inc....Cover 4

XUM